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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,863	08/07/2001	Junichi Hayakawa	740670-264	7958

31780 7590 05/20/2005

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EXAMINER

BEFUMO, JENNA LEIGH

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/890,863

Applicant(s)

HAYAKAWA ET AL.

Examiner

Jenna-Leigh Befumo

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. In view of the Appeal Brief filed on March 7, 2005, PROSECUTION IS HEREBY REOPENED. New rejections are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. Claims 18 – 24 are pending.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 21 – 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. The diaphragm claimed recited in claim 21 is indefinite since it is unclear what portion of the diaphragm is made up by the woven fabric and what the additional structure limitations of the diaphragm is claimed. The claim recites that the fabric is at least a portion of the diaphragm, but the applicant does not recite any other additional structural limitations of the diaphragm. Can the

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diaphragm be made of only the woven fabric as recited in claim 19? If the woven fabric is only a portion of the diaphragm then what is the structure of the rest of the diaphragm? Claim 23 is similarly rejected. The only positively recited structural limitations are drawn to the woven fabric itself.

6. Claims 22 and 24 are rejected since it is unclear what the structure of the loud speaker and the loud speaker diaphragm are. The claim only positively recites that the diaphragm is made up a woven fabric, but does not recite any limitations of the speaker or the diaphragm or even recite if anything is done to the fabric to make it a loud speaker diaphragm? Claim 24 recites that the fabric is at least a portion of the diaphragm but does not recite any structural limitations of the rest of the diaphragm. Further, neither claim positively recites structure of the speaker itself and how the diaphragm relates to the speaker structure. Thus, the claim only positively recites the structure of the woven fabric.

Claim Rejections - 35 USC § 102

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 19 – 24 stand rejected under 35 U.S.C. 102(b) as being anticipated by Weber, Jr. et al. (5,233,821) for the reasons of record.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. Claims 21 – 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over RD 354039 A in view of Weber, Jr. et al.

RD 354039A discloses that PBO can be used as a blend in various end uses such as protective clothing, fire resistant fabrics, and speaker cones (abstract). Further, RD 354039 A discloses that PBO has equal or better tensile elongation and compressive strength, and lower moisture absorption and lower and more stable dielectric constant as compared to known aramid fibers (abstract). However, RD 354039 A fails to teach how the fiber is made into a fabric. The features of Weber, Jr. et al. have been set forth in the previous Office Action. Weber, Jr. et al. is drawn to fabrics made from PBO fibers. Weber, Jr. et al. discloses that PBO fibers can be used by themselves or combined with conventional fibers or yarns, such as nylon, polyester or rayon, and knit, braided, woven or formed into nonwoven fabrics (column 6, lines 34 – 42). Therefore, it would have been obvious to one having ordinary skill in the art to produce blended woven fabrics having PBO as described by Weber, Jr. et al. and using those fabrics in any of the end uses disclosed for PBO in RD 354039 A since RD 354039 A discloses that PBO fibers can be used in any number of end uses and that PBO fibers has equal or better properties than aramid fibers. Thus, claims 21 – 24 are rejected.

Response to Arguments

11. Applicant's arguments filed March 7, 2005 have been fully considered but they are not persuasive. The Applicant argues that the prior art does not teach all the elements of the claimed invention. Specifically, the Applicant argues that the prior art does not teach the loud speaker diaphragm structure (Brief, pages 4 – 8). First, it has been held that if a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim. See,

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e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). Further, it has been held that “Arguments that the alleged anticipatory prior art is nonanalogous art’ or teaches away from the invention’ or is not recognized as solving the problem solved by the claimed invention, [are] not germane’ to a rejection under section 102.” *Twin Disc, Inc. v. United States*, 231 USPQ 417, 424 (Cl. Ct. 1986) (quoting *In re Self*, 671 F.2d 1344, 213 USPQ 1, 7 (CCPA 1982)). In other words, if the prior art teaches all the positively recited structural limitations then it will anticipate the claimed invention even if the claimed invention has a different use.

Therefore, with respect to claims 19 and 20, the preamble recites a “woven fabric for loud speaker diaphragm using a woven fabric”. The loud speaker diaphragm is not positively recited, and is considered intended use, and the prior art should only be capable of performing the intended use, which in this case is true. Further, claims 21 and 23 which recite “a diaphragm for a loud speaker” in the preamble is interpreted as intended use since the Applicant fails to recite any further structural limitations to the woven fabric. In this case, the woven fabric taught by Weber, Jr. et al. can be used as a diaphragm since it has the same structural limitations as the prior art and thus anticipated the claimed invention. And with respect to the loud speaker claims, again the Applicant only positively claims the structure of the woven fabric without providing any structure for the diaphragm or loud speaker. The claims drawn to a loud speaker and a diaphragm provide no positive structural limitations with respect to the loud speaker or diaphragm outside of the structure of the woven fabric. Thus, the fabric only needs to be able to be used in the claimed applications, i.e., the fabric would need to be capable of vibrating to produce sound. Since the fabric is made from the same material as the material claimed by the

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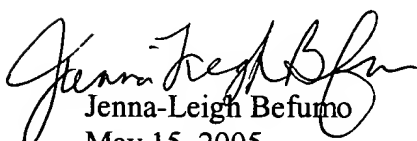
applicant, the inherently the fabric must be able to vibrate sufficiently to produce sound. The claim itself does not recite any further structure required in the loudspeaker or the diaphragm and these limitations are considered intended use. Therefore, the rejection is maintained.

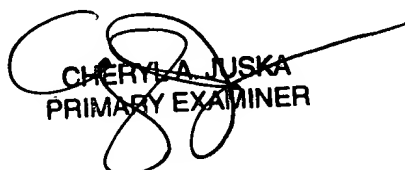
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Befumo whose telephone number is (571) 272-1472. The examiner can normally be reached on Monday - Friday (8:00 - 5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jenna-Leigh Befumo
May 15, 2005


CHERYL A. JUSKA
PRIMARY EXAMINER


DEBORAH JONES
SUPERVISORY PATENT EXAMINER